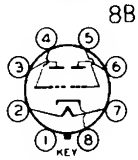
6N7, 6N7-GT/G

CLASS B TWIN AMPLIFIER

Heater ■	Coated Unipotential Cathode		
Voltage	6.3		a-c or d-c volts
Current	0.8		amp.
	6N7	*6N7-GT/G*	
Maximum Overall Length	3-1/4"	3-5/16"	
Maximum Seated Height	2-11/16"	2-2/4"	
Maximum Diameter	1-5/16"	1-5/16"	
Bulb	Metal Shell, MT-8	T-9	
Base	Small Wafer / Octal 8-Pin	Intermed. Sh. / Octal 8-Pin	
Basing Designation	8B	G-8B	
Pin 1- (6N7, Shell / 6N7-GT/G, No Conn.)		Pin 5-Grid (Triode T_1)	
Pin 2-Heater		Pin 6-Plate (Triode T_1)	
Pin 3-Plate (Triode T_2)		Pin 7-Heater	
Pin 4-Grid (Triode T_2)		Pin 8-Cathode	
Mounting Position	BOTTOM VIEW		Any



For convenience, one triode unit is identified as T_1; the other as T_2.

Maximum Ratings Are Design-Center Values

CLASS B POWER AMPLIFIER

Plate Voltage		300 max.	volts
Peak Plate Current (per plate)		125 max.	ma.
Average Plate Dissipation (per plate)		5.5 max.	watts
Typical Operation:			
Unless otherwise specified, values are for the two units			
Plate-Supply Impedance	0	1000□	ohms
Effective Grid-Circuit Impedance (per unit)	0	516□□	ohms
Plate Voltage	300	300	volts
Grid Voltage	0	0	volts
Peak A-F Grid-to-Grid Voltage▲	58	82•	volts
Zero-Sig. D-C Plate Cur.	35	35	ma.
Max.-Sig. D-C Plate Cur.	70	70	ma.
Peak Grid Cur. (per unit)	20	22	ma.
Effective Load Res. (plate to plate)	8000	8000	ohms
Total Harmonic Distortion	4	8	%
Third Harmonic Distortion	3.5	7.5	%
Fifth Harmonic Distortion	1.5	2.5	%
Max.-Sig. Power Output	10	10	watts

□ Practical design value.

□□ At 400 cycles for class B stage in which the effective resistance per grid circuit is 500 ohms, and the leakage reactance of the coupling transformer is 50 millihenries. The driver stage should be capable of supplying the grids of the class B stage with the specified values at low distortion.

• Includes peak voltage drop through the grid circuit impedance.

▲ For power output shown.

Two 6N7's or 6N7-G's can be operated in a class B output stage with the two triode units of each tube connected in parallel to give a power output of 20 watts (approx.) under conditions of 300 volts on the plates and a 5000-ohm plate-to-plate load.

■ See next page.

◄ Indicates a change.

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

6N7
6N7-GT/G

6N7, 6N7-GT/G

CLASS B TWIN AMPLIFIER

(continued from preceding page)

CLASS A_1 AMPLIFIER – As Driver

Both grids connected together at socket; likewise, both plates.

Plate Voltage		300 max.	volts
Plate Dissipation (per plate)		1.0 max.	watt
Typical Operation:			
Plate	250	294	volts
Grid ▲	-5	-6	volts
Amp. Fact.	35	35	
Plate Res.	11300	11000	ohms
Transcond.	3100	3200	μmhos
Plate Cur.	6	7	ma.

Plate Load—Depends largely on the design factors of the class B amplifier. In general, the load will be between 20000 and 40000 ohms.

Power Output—Under max. voltage conditions, upwards of 400 mw. can be obtained.

■ In circuits where the cathode is not directly connected to the heater, the potential difference between heater and cathode should be kept as low as possible.

▲ The d-c resistance in the grid circuit of the 6N7 or 6N7-GT/G as a class A amplifier may be as high as 0.5 megohm with cathode bias. With fixed bias, the resistance should not exceed 0.1 megohm.

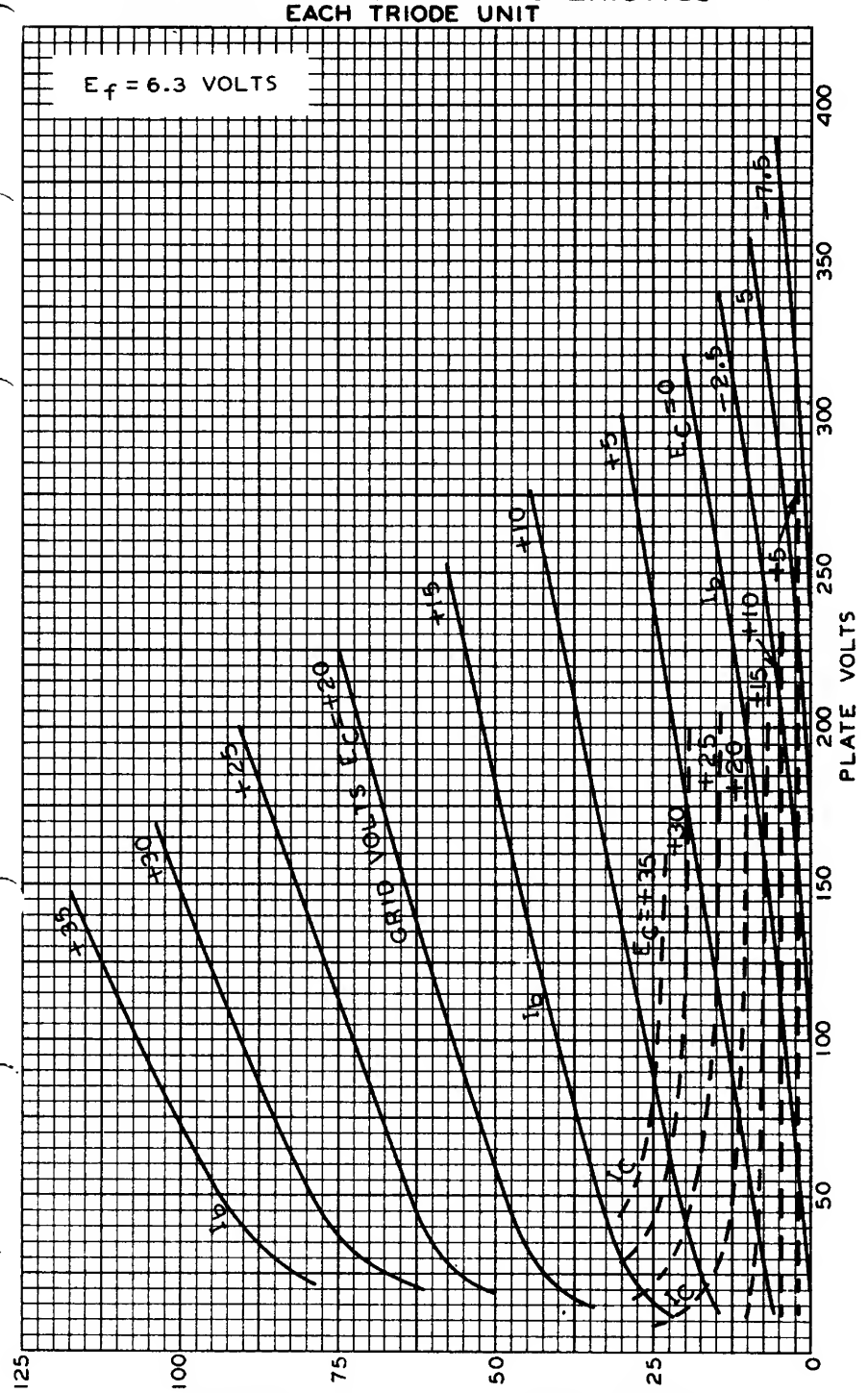
For additional curves, see Types 6A6 and 53; for data, see RESISTANCE-COUPLED AMPLIFIER CHART.

< Indicates a change.

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

6N7

AVERAGE PLATE CHARACTERISTICS
EACH TRIODE UNIT



DEC. 18, 1939

RCA RADIOTRON DIVISION
RCA MANUFACTURING COMPANY, INC.

92C-4611